The ADC Schema Map

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The basically functionality of ADC is to replicate entries from the Exchange Directory to the Active Directory, and vice-versa, and keep this entries in sync. More than anything else, an entry is just a collection of attributes. So, what ADC does is to map attributes from one directory to another.

Based on that, we could say that the ADC more important job is the mapping of attributes. This is accomplished by reading a set of rules from a special place on the Active Directory.

When you install ADC for the first time in your forest, it will create an entry on the configuration container called “Default ADC Policy”. The entry contains basic rules that should apply to all Connection Agreements that you create. One of these rules is the Schema Map that defines the attribute mapping. These are stored on two attributes: “msExchServer1SchemaMap” and “msExchServer2SchemaMap”, one for each direction, from Active Directory to Exchange Directory, and vice-versa, respectively.

These two attributes contain information that let us map other attributes based on attribute name, attribute syntax and object-class. Some attributes have the same name on both directories like “mail”, some attributes are different only by a dash, like in “homeMDB” in AD and “home-MDB” in the Exchange Directory, and other attributes are very different like “proxyAddresses” in AD and “otherMailbox” in Exchange. But this is very simple to resolve. The biggest challenge is for attributes that have different syntax or different size. ADC has to replicate back and forth without losing information.

Attributes like “manager” or “member” add a new challenge, because they are not a simple string value, but a link to another object. On this case, ADC has to try to resolve this link before replicate the entry. If the link is not present, we should retry sometime later.

To control the Schema Map, you can go the “Active Directory Connector” snap-in and right-click on the “Active Directory Connector Management” and choose properties. There are two tabs available to you to control, which attributes are replicated and which ones are not in both directions “From Exchange” and “From Windows”. Be very careful if you’re unselecting some attributes because this might disrupt some functionality.